

Appendix 5: Caribou Habitat Assessment

Caribou Habitat Management in E8

The E8 Forest Management Plan (FMP) was developed to provide a guide for sustainable management of forest resources and non-timber values in the E8 Forest Management Unit (FMU). Since the initiation of the plan development, many factors have influenced and shaped the final plan. E8 falls within the A La Peche and Little Smoky Caribou ranges. These herds are considered a species at risk under the Federal Government's *Species at Risk Act* (SARA). E8 contains large areas of mature pine forest that is susceptible to a mountain pine beetle infestation as identified through the MPB Stand Susceptibility Index (SSI).

The FMP was developed to achieve the target of meeting the 5 main goals of the FMP. Two of these goals were the consideration of long term caribou habitat management and to reduce the amount of high risk Mountain Pine Beetle (MPB) susceptible stands across the FMU. Since the initiation of the plan in 2004, the most current information was used to ensure that an effective and proactive approach was taken to manage caribou habitat and MPB stand susceptibility in E8. Since one of the goals of the E8 FMP is to “determine spatially, operable and sustainable supplies of timber”, a Timber Supply Analysis (TSA) was completed to identify a long term wood supply for the quota holders in E8. This TSA utilized the “Intactness Area Strategy” for Woodland Caribou in the Eastern Slopes Region and followed the Mountain Pine Beetle Action Plan to reduce highly susceptible pine stands.

The Intactness Area Strategy was developed by the Foothills Landscape Management Forum (FLMF). This group was created in 2005 to focus on minimizing the industrial footprint within the Little Smoky and A la Peche caribou ranges. The FLMF (formerly Caribou Landscape Management Association (CLMA)) is a partnership consisting of the Aseniwuche Winewak Nation of Canada, forestry companies and energy companies that work in west-central Alberta. This partnership resulted in a forum that facilitates opportunities for integrated land management projects within the A la Peche and Little Smoky ranges. In 2007, the FLMF initiated the development of a Caribou Habitat Intactness Analysis. A GIS layer was created to identify intact caribou habitat for the Little Smoky, A la Peche, Narroway, and Red Rock Prairie Creek caribou herd ranges, resulting in the Intactness Area Strategy. This strategy was included as a part of the West Central Alberta Caribou Plan submitted to the Alberta Caribou Committee and currently under review by Alberta Sustainable Resource Development (ASRD).

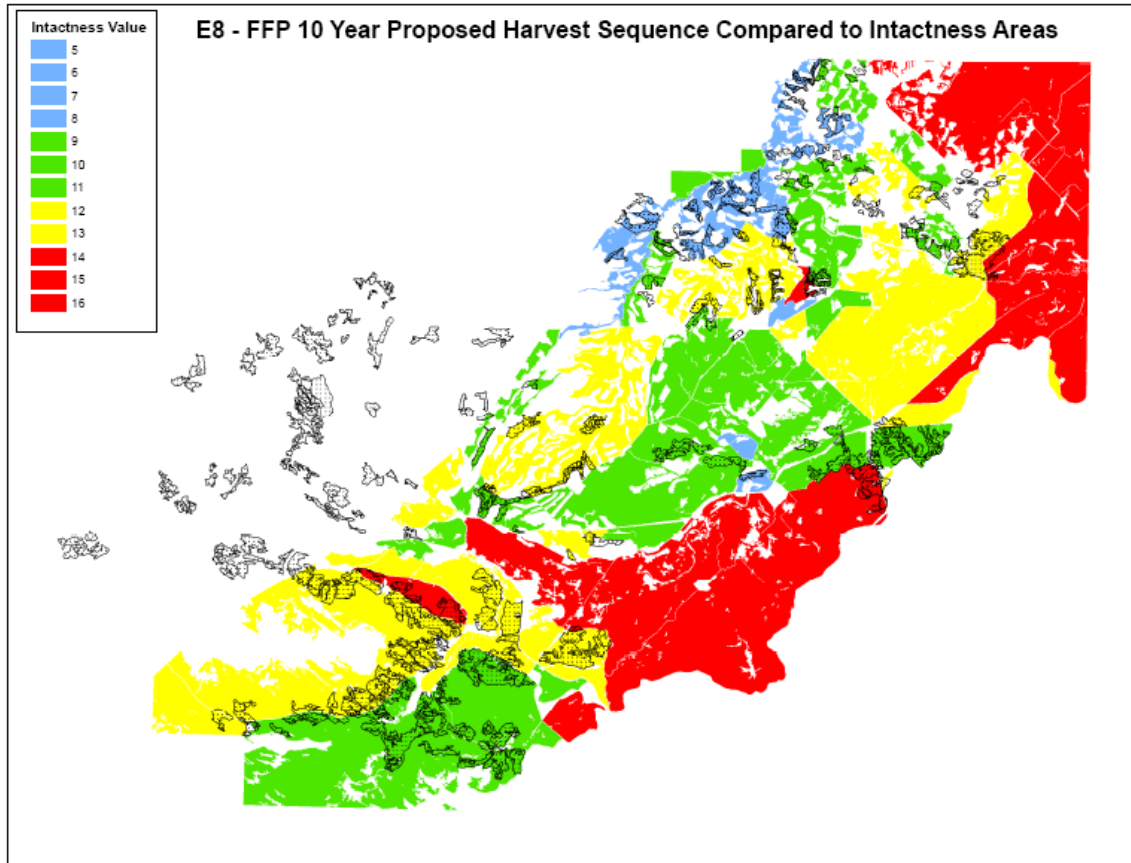
In order to complete this analysis, factors that directly affected caribou habitat quality were identified. These factors were incorporated into the analysis and include the forest inventory (AVI), the boundaries of the caribou herds, historical human disturbance information, seismic density, GPS locations of caribou and the caribou resource selection function information. The resulting data was critical for identifying areas of higher quality habitat and allowed for a ranking system to be implemented within the caribou herd boundaries.

The intactness areas were identified by developing a nine step process (Intact Area Determination Process) which identified key inputs that influenced habitat quality. For example, patches smaller than 200ha and younger than 80 years were removed from the intactness area. Once completed, the areas were ranked using the Macro Scale Patch Ranking Process. Each patch was ranked based on predetermined factors such as patch size and RSF value. These predetermined factors were then awarded a score based on its impact on habitat quality. The higher the score calculated, the higher the quality of the patch. The score of each patch was added up and given a rank on a scale of 2 to 22.

Since the E8 forest management unit is in the heart of the A la Pêche and Little Smoky caribou herd ranges, special management considerations were required for caribou habitat management. The initial Timber Supply Analysis (TSA) assumed a harvesting target maximum of 200 ha/year in the southern portion of the caribou range within E8 (the “deferral zone”) after a five year deferral period. Clearings from oil and gas disposition development are also included in this 200 ha/year allowance. The initial strategy applied to the first 10 year period and was used to give ASRD adequate time to develop a caribou range plan. After the completion of the initial TSA, new information was made available and used for the new FMP.

The new management approach for E8 utilizes the Intactness Area Strategy. This strategy replaced the old general caribou deferral zone and was designed to be a landscape level tool. In 2008, it was used in the development of the spatial harvest sequence for the E8 FMP. Constraints were applied to the TSA based on the GIS data supplied by the FLMF resulting in a new caribou management area in E8. This strategy allowed the planning group to precisely plan for harvesting within the old “Caribou Zone”. Timber harvesting is not scheduled in the “core” intactness areas in E8 for a 20 year period. Core intactness areas are those areas identified as having an intactness rating of 14, 15 and 16 under the Caribou Habitat Intactness Analysis. Figure 1 displays the intactness rating and 10 year harvest sequence. Stands that have a Stand Susceptibility Index with Climate Factor greater than or equal to 50 may be accessed after the first 10 years of the sequence.

Figure 1: Intactness Areas in E8



At the time the plan was being developed, SRD and Foothills Forest Products Inc. agreed to use the intactness strategy as it was the best methodology for measuring and identifying caribou habitat at the time the plan was being developed. This approach has not been formally approved under the caribou recovery planning process. The West Central Alberta Caribou Plan was submitted for review in May 2008 and the E8 planning team was unable to utilize this plan for the E8 FMP. As new methods for measuring and assessing habitat quality as well as innovative ways of conserving caribou populations are developed, the plan will be revisited to ensure that methods used to manage caribou habitat are still effective.